

## PSYCHOSOCIAL DETERMINANTS OF BURNOUT SYNDROME: METAANALITIC STUDY

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### *Abstract*

*The paper focuses on identifying the most important of the burnout's psychosocial determinants. For this area of research relevant studies were used to obtain an exploratory investigation. The relationship between psychosocial characteristics of people with burnout syndrome or recurrence was evaluated based on the studies reported. For this purpose literature was identified using Medline and Psycinfo therefore a number based meta-analysis of eleven qualitative studies.*

Keywords: burnout, stress, job dissatisfaction

### **Introduction**

In 1975, Freudenberger proposed the concept of „burnout”<sup>1</sup> which represents the emotional exhaustion appeared after the excessive solicitation of

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energy and resources that hired people deal with. Those who consecrated the concept in the literature of specialty were Maslach and Jackson, who defined “burnout” as a syndrome of emotional distress, depersonalization and reduction of personal accomplishments. The syndrome manifests mainly in the case of activities which imply the direct contact with people (Maslach & Jackson, 1981, p. 99).

The burnout may include physiological exhaustion and reduced orientation towards the personal goals; it appears as a consequence of the high stress levels at work, of personal frustrations and of inadequate modalities for coping them (Marian, Drugaș, & Roșeanu, 2005). Although initially the burnout was considered as a vague concept, presently it is widely accepted as a psychological syndrome in answer to the interpersonal stressors of work. On the other side, the burnout is categorised in ICD-10 (cod z 73.0) amongst the problems related to the difficulties of managerial life.

The burnout appears in persons who work in domains which imply frequent and intense contacts with people. The burnout is defined in the speciality literature by systematic reference at three levels: emotional exhaustion, depersonalization and low personal accomplishments. In the stage of *emotional exhaustion* the individual feels he is impoverished with work, frustrated and lacking emotional resources. *Depersonalization* refers to negative reactions, cynical reactions or even to the insensitivity in relations with people. *Low personal accomplishments* include the decrease of professional competence feeling. The three dimensions are not separated one from each other, but the connection is stronger between the emotional exhaustion and depersonalization (Westman & Eden, 1997; Walters & Raybould, 2007).

Depersonalization refers to the tendency to de-individualize the persons with who we have contact, to the tendency of treating them as objects; it is frequently reflected in the language by using some labels for describing a

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<sup>1</sup> Literally translated by: „completely burnt out”, the term started to be known after the tragic events from the 11<sup>th</sup> of September 2001, from USA, when it was applied to the state of some participants (firemen, corpsmen, professional sanitary or volunteer personnel) whose feeling altered during the scores of days and nights spent at the place of the disaster. The burnout syndrome, sometimes expressed by: exhaustion syndrome („breakdown”) is the result of exhaustion where the extended stress marks the behavioural answer of persons.

person or its disease. Still, moderate levels of detachment are necessary for successfully fulfilling the tasks, but excessive detachment can lead to cynicism.

The feelings of low personal accomplishment received less attention from the researchers, but it is obvious that they had a de-motivational effect, as the studies regarding the learned helplessness show (Westman & Eden, 1997; Marian, Filimon, & Cioară, 2009); they demonstrate that people who are in situations where their repeated efforts do not have any expected results, they will finally develop depressive symptoms and when they are convinced that their efforts are in vain, they give up (Marian, 2004).

Among the aspects discussed by theoreticians were found the ones related to the order of the apparition of the three dimensions: emotional exhaustion - depersonalisation - the lack of personal accomplishments (as Maslach initially proposed) or depersonalisation - the lack of personal accomplishments - emotional exhaustion.

Most of the authors agree that the lack of personal accomplishments is a separate dimension having its own characteristics and antecedents; authors such as Lee and Ashford (1996) claimed that depersonalisation and the lack of personal accomplishments can appear simultaneously after the emotional exhaustion. In a recent try for extending the syndrome of exhaustion because of the jobs, at the position outside the sector of human services, Leiter and Schaufeli suggested a reformulation of the three dimensions in exhaustion, cynicism and personal efficacy; Leiter drew the attention on the existence of the other side of the continuum, represented by the persons who are profoundly involved in their job (Westman & Eden, 1997; Baba, Jamal, & Tourigny, 1998; Marian & al., 2005).

Among the signs of the apparition of the exhaustion we mention the chronic fatigue, the reaction of anger at the clients' or job's requests, cynicism, negativism, irritability, anger explosions for apparently minor causes, migraines and gastro-intestinal disorders, loss or gain of weigh, insomnia, depressive mood, helplessness feelings and the assumption of increasing risks.

The burnout appears when some values which were lost or not, are not coping with actual conditions or do not offer the expected reward. The work can be strenuous by the apparition of some elements such as the ambiguity of the role, role conflict, stressing events, work pressure, pressure (or time pressure). The resources that the individual can appeal to are the social support

obtained from different sources, opportunities for improving the work conditions (such as gaining the control, participation in taking the decisions, autonomy etc.) or the meeting received in different situations. As a consequence of losing the access to some of these resources, can appear effects on behavioural and attitude plan, such as the development of some new modalities of coping, the intention of quitting the job, decrease of involvement in the life of the organization and in work, the decrease of work satisfaction (Lee & Ashforth, 1996).

Job requirements are generally seen as losses because their fulfilment requires precious resources which are generally seen as gains. To the extent to which people overestimate the importance of the solicitations (the importance of the losses), the resources they use for coping with future losses are bigger than those which might really be necessary. This overcompensation partly explains why persons who work in services domain seem to be more affected by the stressors; for these persons, the key decision which must be taken is connected to how many personal resources must the individual invest in order to cope with solicitations, in the same time taking care not to exhaust his resources. The beginning of exhaustion takes place when the employees feel they do not have any more emotional resources in order to cope with stressors and, instead of coping with them, they adopt withdrawal strategies, appealing the depersonalization. Consequently, depersonalization is strongly associated with the role stress and stressing events.

Emotional exhaustion and depersonalization are closely related to the intentions of leaving the job and to the organizational engagement; personal accomplishments are closely related to control coping, suggesting that an answer oriented towards the problem and a positive evaluation of personality could be effective in increasing the personal accomplishments.

### **Materials and the method**

The objective of this work is to identify in the literature of speciality the relevant dimensions of the psychosocial determinants of the burnout. The reference studies were used for an exploratory investigation of the theme. The relations between the determinant psychosocial characteristics of the persons with exhaustion syndrome were investigated on the basis of a set of reference

studies. For this purpose the speciality literature was monitored by using *Medline* or *Psyinfo*, including key words such as: burnout, emotional exhaustion, Burnout Inventory etc.

A number of eleven studies were selected and there were observed sections such as: objectives, design, number of participants, instruments, results and conclusions.

### Results from the literature of speciality

The great majority of studies focused on the burnout and less on other aspects of stress. The number of the participants to the studies is between 27 and 232342. In eleven analysed studies are included more women than men and only in one study (Dormann & Zapf, 2002) the report is opposed. Most of the studies did not explicitly present the level of the participants' education or their provenience. The average age of the participants to the studies was identified in three studies as ranging from 23,1 to 39,5 (Plana, Fabregat, & Biscarri-Gassió, 2002; Schaufeli, Martínez, Marques Pinto, Salanova, & Bakker, 2002; Dormann & Zapf, 2002). From the point of view of the statute, the participants were part of the medical staff (doctors, nurses, residents etc.), students, employees in front-line food, workers etc.

Table 1. Qualitative meta-analysis of studies regarding burnout

Author	Design	Subjects	Measurements & Results
Shanafelt, Bradley, Wipf, & Back (2002)	Design: Cross-sectional study using an anonymous, mailed survey.  Setting: University-based residency program in Seattle, Washington.	115 internal medicine residents	<i>Measurements:</i> Maslach Burnout Inventory. Five questions developed for this study assessed self-reported patient care practices that suggested suboptimal care. Depression and at-risk alcohol use were assessed by using validated screening questionnaires. <i>Results:</i> Of 115 (76%) responding residents, 87 (76%) met the criteria for burnout. Compared with non-burned-out residents, burned-out residents were significantly more likely to self-report providing at

			least one type of suboptimal patient care at least monthly (53% vs. 21%).
Plana, Fabregat, & Biscarri-Gassió, (2002)	<i>Development of the model.</i> The strategy followed is a comparative one of nested models, through which it is attempted to assess the best of a set of models, allowing a more accurate assessment and with a wider perspective of the model that best fits the data observed.	127 people, 86 women and 41 men (mean age 31.28 years; SD=7.63)	<i>Measurements:</i> Spanish adaptation of the Maslach Burnout Inventory. Coping strategies - Spanish translation of the PsychNurse Methods of Coping Scale. <i>Results:</i> Significant values of $\chi^2$ ( $p < .05$ ) indicate that the proposed model is significantly different from the observed data, thus determining a poor fit of the model in question. Values of $>.90$ for the GFI, the NNFI, and the CFI, and values $<.05$ for the RMSEA, suggest an acceptable fit.
Rowe (2006)	Short- and long-term approaches to behavioral change were evaluated in 3 groups (short term, long-term, control).	108 subjects (women, $n=59$ ; men, $n=49$ ).	<i>Measures and Procedures:</i> Maslach Burnout Inventory; Cognitive Hardiness Scale (CHS); State-Trait Anxiety Inventory (STAI); Stress Assessment Inventory (SAI); Ways of Coping Scale. Approximately 40% ( $N=126$ ) were randomly selected and assigned to 3 groups. <i>Results:</i> Subjects participating in a 6-week stress-management program designed to develop stress management skills reported temporary decreases in burnout, while subjects receiving additional “refresher” sessions showed decreases in burnout throughout a 4-year period.
Corrigan, Diwan, McCracken, Oliver, Backs, Rashid, Campion,	Research participants were recruited from 18 treatment programs provided by four mental health agencies in Illinois. Programs included	One hundred and eighteen staff working in community	<i>Measures:</i> Barriers to Implementation of Behavior Therapy (BIBT); Maslach Burnout Inventory; Modified Social Support Questionnaire (MSSQ); The Multifactor Leadership Questionnaire, Version Y (MLQ);

<p>&amp; Davies Farmer (2001)</p>	<p>residential, vocational, and skill- oriented outpatient services for children and adults with severe mental illness.</p>	<p>-based treatment programs for adults and children with severe mental illness completed the Barriers to the IBTT.</p>	<p>Organisational Development Questionnaire (ODQ). <i>Results:</i> An analysis from a previous study (Corrigan, Kwartarini, &amp; Pramana, 1992) identified two reliable and valid factors that suggested perceived organisational barriers: institutional constraints and insufficient collegial support. Results of a confirmatory factor analysis on data from this study supported the earlier factor structure.</p>
<p>Schaufeli, Martínez, Marques Pinto, Salanova, &amp; Bakker (2002)</p>	<p>Structural equation modeling (SEM) methods as implemented by AMOS (Arbuckle, 1997) were used to test two factorial models for the MBI- SS and the UWES-S, respectively.</p>	<p>1,661 undergradu ate students; the mean age was 23.1 years (<i>SD</i>=4.9).</p>	<p><i>Measures:</i> a modified version of the MBI-GS (Schaufeli et al., 1996). <i>Results:</i> The three-factor structure of the MBI-SS fits to the data of each sample separately, albeit after some correlations between error- terms were allowed. However, these correlations largely pertained to similar pairs of items across at least two samples.</p>
<p>McLeod, Densley, &amp; Chapman (2006)</p>	<p>A quasi-experimental repeated measures design was used. Measures were taken immediately before and immediately after the training course for all subjects (within one week of the training dates).</p>	<p>Twenty- seven mental health nurses working in psychiatric inpatient units in Australia and the United Kingdom.</p>	<p><i>Measures and Procedure:</i> All of the study measures were self-report questionnaires that were completed immediately prior to each training event and immediately after the final session. The Maslach Burn-Out Inventory: Third Edition (MBI); DeVillers Carson Leary Stress Scale, Version 3 (DCL); General Health Questionnaire (GHQ); Barriers to Implementation of Behaviour Therapy scale (BIBT); Additional attitudes were measured with an adapted version of the 34 item scale used by McLeod et al. (2002). <i>Results:</i> Training improved therapeutic attitudes but did not alter self ratings of job-stress and</p>

			burnout. The training participants showed increases in motivation ( $Z = -1.86$ , $p < .05$ ), work-related self-esteem ( $Z = -2.33$ , $p < .05$ ), adequacy ( $Z = -2.55$ , $p < .05$ ), and legitimacy ( $Z = -1.67$ , $p < .05$ ) following training.
Walters & Raybould (2007)	The hypotheses were tested using bivariate correlation.	The cross-sectional study included a sample of 300 front-line food and beverage attendants currently working 25 hours per week.	<i>Measures:</i> Maslach Burnout Inventory-General Scale (MBI-GS); Survey of Perceived Organisational Support. <i>Results:</i> Significant relationships were found between POS and each of the three burnout dimensions of exhaustion, cynicism and personal efficacy. These results support the first hypothesis that exhaustion and cynicism are negatively related to POS.
Dormann & Zapf (2002)	This hypothesis was tested using four waves of a six-wave longitudinal study based on a representative sample of the residents of Dresden, Germany. The advantages of longitudinal designs were comprehensively used including the testing of different time lags, the testing of reversed causation, and modelling of unmeasured third variables that may have spuriously created the pattern of	567 participants, The sample is representative of the working population of Dresden. There were 52.4% male and 47.6% female participants. Age ranged from 16 to 63 years ( $M=39.50$ ,	<i>Measures:</i> Items of social stressors were developed by Frese and Zapf (1987); Irritation was measured using a scale developed by Mohr (1986); and Depressive symptoms were measured using a scale developed by Mohr (1986), which is partly based on the Zerrsen (1973) and Zung (1965) depression scales. <i>Results:</i> First, the LRSCF model with two 2-year lagged effects of social stressors on irritation and one 4-year lagged effect of irritation on depressive symptoms was augmented by two 2-year (one 4-year) lagged effects of irritation on social stressors. Second, it was tested whether there were 2-year (or 4-year) lagged effects of depressive symptoms on social stressors.



	observed relationships. Structural equation modelling provided evidence for the proposed mediation mechanism and suggests that time lags of at least 2 years are required to demonstrate the effects.	SD=11.54)	Third, it was also tested whether there were 2-year (or 4-year) lagged effects of depressive symptoms on irritation. In none of the six tested models did any reversed effect reach significance ( $t < 1.63$ ; $p > .10$ ). None of the three models involving 2-year lagged reversed effects fitted significantly better than the model without reversed effects ( $\Delta\chi^2 < 2.97$ , $p > .22$ ). No clear evidence for reversed causation was found.
Aiken, Clarke, Sloane, Sochalski, & Silber (2002)	Cross-sectional analyses	10184 staff nurses surveyed, 232342 general, orthopedic, and vascular surgery patients discharged from the hospital, and administrative data from 168 nonfederal adult general hospitals in Pennsylvania.	<i>Measures:</i> Risk-adjusted patient mortality and failure-to-rescue within 30 days of admission, and nurse-reported job dissatisfaction and job-related burnout. <i>Results:</i> After adjusting for patient and hospital characteristics (size, teaching status, and technology), each additional patient per nurse was associated with a 7% (odds ratio [OR], 1.07; 95% confidence interval [CI], 1.03-1.12) increase in the likelihood of dying within 30 days of admission and a 7% (OR, 1.07; 95% CI, 1.02-1.11) increase in the odds of failure-to-rescue. After adjusting for nurse and hospital characteristics, each additional patient per nurse was associated with a 23% (OR, 1.23; 95% CI, 1.13-1.34) increase in the odds of burnout and a 15% (OR, 1.15; 95% CI, 1.07-1.25) increase in the odds of job dissatisfaction.
Visser, Smets, Oort, & DeHaes (2003)	3 dimensions of burnout as separate dependent variables. The independent variables were stress	A random, nonstratified sample of 2400 specialists	<i>Measurement:</i> Scales derived from the Consultants' Mental Health Questionnaire; Maslach Burnout Inventory; Multidimensional Perfectionism Scale; VOS-D;

	and satisfaction. Linear and then logistic regression analyses. For logistic regression.	was selected from the total population of Dutch medical specialists (including all specialists except general practitioners [n = 14 540]).	Consultants' Job Stress and Satisfaction questionnaire; 3 areas considered important in relation to job stress, job satisfaction and burnout: personal characteristics, job characteristics and perceived working conditions. <i>Results:</i> Personal and job characteristics explained 2%–6% of the variance in job stress and satisfaction. Perceived working conditions were more important, explaining 24% of the variance in job stress and 34% of the variance in job satisfaction. Perceived working conditions were more important, explaining 24% of the variance in job stress and 34% of the variance in job satisfaction. Burnout was explained by both high stress and low satisfaction (41% of variance explained) rather than by stress alone.
Ewers, Bradshaw, McGovern & Ewers (2002)	A quasi-experimental pretest/post-test design was used with subjects being randomly allocated to either a waiting list control condition or to the PSI training group.	Thirty-three staff met this criteria, 16 were male and 17 female. Subjects in the experimental group received 20 days training in PSI.	<i>Measurement:</i> Trainees' knowledge was assessed using a 30 item multi-choice question paper that aimed to measure the trainees' knowledge concerning schizophrenia and psychological approaches. Attitudes were assessed using a measure developed by the first author; Maslach Burnout Inventory. <i>Results:</i> The mean group scores for knowledge about serious mental illness at baseline were 54,49 for the experimental group and 52,57 for the control group (not significant). At follow up a significant difference in knowledge scores for the groups was apparent ( $P < 0,01$ ); the experimental group's score increased by 24,50-78,99

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			while the control groups score increased by only 1,08-53,66. At follow up, the scores for the experimental group had increased by 22,77 from 58,18 to 80,96, whilst the control group score had decreased by 194 from 55,96 at baseline to 54,02 at follow up ( $P<0,01$ ).
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#### *The design of the studies*

In three studies were identified evaluations in two times (pre and post test); post training measurements were implemented immediately after finalising the intervention or after a month.

The studies reported in the literature of speciality presented prospective designs. It is not always possible to clearly delimitate between a retro and a prospective design, for example the life events are always retrospectively evaluated, while the study of the relation between life events and the advancement of the burnout is always prospective. Despite all this, we did not identify any study to really have a prospective design such as the psychological analysis before labelling.

The evaluation of the relationship between the socio-cognitive variables and the results of the trainings were controlled by a number of socio-demographic and/or clinical variables.

#### *Statistic analyses*

In eight studies, the Maslach Burnout Inventory was used as a burnout evaluation instrument (Maslach & Jackson, 1981) in its original form proposed by the authors or in the form adapted to the specific of the research.

There is no standard modality for the statistical analysis of the mentioned data and for this reason, for the time being, a quantitative meta-analysis is not possible. The analysis of the registered data implies the test t, the test Z, ANOVA, the regression or the modelling which conceptually and experimentally ground the burnout syndrome.

## Conclusions

Generally, the researches regarding the relation between the work and mental health focused on stress, exhaustion syndrome, depression, anxiety and well being as the major dimensions of mental health. Most of the researches were focused on stress and burnout as they are the most rigorous and comprehensive.

On the base of the studies previously referred to, a number of meta-analytical observations can be made. Shanafelt & al. (2002) identify a statistically significant correspondence between the high level of burnout and a negative perception of the reports between the medical staff and the patients. The study reconfirms the tendency of the research to connect the exhaustion syndrome with the relational stress elements from the activity environment. Plana & al. (2002) reveal the significant impact of the increased feeling of personal fulfilling on the burnout semeiology: the stronger the personal achievement feeling is, the lower is the semeiology. The study reveals that we cannot speak of a mutual potency as the burnout impact on the personal achievement feeling is insignificant.

In the study proposed by Corrigan & al. & Davies Farmer (2001) are investigated the major institutional barriers which affect the efficiency of the burnout combat programs. The constrains of institutional nature and the low collegial support (the lack of partnership reports) represent organizational barriers which stop the success of the training programs having as an objective the decrease of the exhaustion syndrome at job. Schaufeli & al. (2002) expectedly confirm the negative correlation of the academic performances in the case of students from European universities with the presence of the burnout semeiology. The study also remarks the fact that the increase of the determination level (motivational element) with which the student engaged in fulfilling the academic duties attracts a decrease of the burnout. The efficiency and the vigour of the academic engagement positively correlated with the level of the scholar results (this aspect is probated by a significantly bigger number of passed exams in the case of the subjects with increased motivational level). Naturally the results of the study entitle the admission of significant correspondence between the increase of motivational level and the success of the strategies for combating the exhaustion syndrome.

The research of Walters and Raybould (2007) observes that any investigation of the burnout phenomenon is forced to consider a series of complementary factors related to the environment of the activity and the social nature. The POS (Perceived Organisational Support) positively correlates with the personal efficiency contributing to the diminution of burnout semeiology. Dormann and Zapf (2002) orient the research in the direction of establishing the effects of the social stressors on depressive symptoms. This report is directly mediated at the irritation level of the subjects. The conclusions of the research shown that we do not have proves to clearly confirm the fact that the social stress factors determine in a non-mediated manner the apparition of some depressive symptoms associated with the exhaustion syndrome.

Aiken & al. (2002) probate the hypothesis of the strong correlation between the frequency of the burnout cases and the work places with increased responsibilities. The subjects investigated at the level of this research develop their activity in the medical system of America. The bigger the number of the patients for a nurse is, and in the departments where the mortality appeared as a consequence of complications determined by medical manoeuvres has an increased rate, it appears a significant increased risk for dissatisfaction at the work place and implicitly a bigger frequency for manifesting the burnout semeiology. Visser & al. (2003) make a direct connection between the decreased level of satisfaction for the activities developed at the work place and the manifestations of burnout type. The subjects who had the feeling of an adverse management and faced the manifested penury of resources at the work place, accused a correlative diminishment of the satisfaction. The improvement of the perception on activity conditions and on loyalty for the values of the organizations can simultaneously be the elements of some training programs against the syndrome of exhaustion at the work place.

In most of the cases, when we speak about the burnout, we refer to the emotional exhaustion, caused by the excessive psychological requirements of the work duties. Emotional exhaustion is the most frequent characteristic of the persons with the jobs which suppose the direct contact with people. Exhaustion supposes an antecedent (from the cognitive - behavioural perspective) the existence of some moods of increased activation; the jobs considered monotonous or boring do not generally lead to the apparition of this kind of moods.

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The aim of this project is to prevent working situations that promote burnout, and, more importantly, to enable team leaders to detect burnout among their staff early and to define strategies to intercept the burnout progress. One of the main reasons for starting a research in this subject is based on the theory that *burnout* is a phenomenon which does not appear all of a sudden but develops slowly and gradually and therefore the risk appears when there is no balance between the exigencies of the job and your personal ability to meet them.

The main result of the project is raising awareness through development of a blended learning strategy including a training support alongside with a communication platform for the non-formal teaching of the adults, through which they will be encouraged to interact with other managers and team leaders.

The direct target groups of this project are managers, team leaders and other members of intermediate management from companies from different service sectors. The final beneficiaries of the project that will be reached *inter alia* by accompanying dissemination activities are affected burnout patients or persons who are in the process of burnout.

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